# CESARO SUMMATION OF A TRIANGLE WAVE

\[
a_{odd} := k \rightarrow \frac{1}{(2k + 1)^2}
\]

(1)

\[
partialsum := K \rightarrow \frac{1}{2} \pi - \frac{4}{\pi} \sum_{k=0}^{K} a_{odd}(k) \cos((2k+1)x)
\]

(2)

\[
mean := M \rightarrow \frac{\sum_{K=0}^{M} \partial sum(K)}{M+1}
\]

(3)

\[
\text{plot}([\partial sum(1), \text{mean}(1)], x=-1..7);
\]
\begin{verbatim}
> plot([partialsum(5), mean(5)], x=-1..7);
\end{verbatim}
Close inspection shows that the Cesaro mean curve is BLUNTER than the partial sum curve.

This is shown clearly by examining the error in the approximations: (Note the change in vertical scale.)

```plaintext
> plot([abs(x) - partialsum(5), abs(x) - mean(5)], x=0..1);
```
> plot([abs(x) - partialsum(15), abs(x) - mean(15)], x=0..1);